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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/363,028	07/29/1999	KENICHI OHTA	35.C13697	7604

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EXAMINER

VIDA, MELANIE M

ART UNIT	PAPER NUMBER
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2626

DATE MAILED: 02/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/363,028

Applicant(s)

OHTA, KENICHI

Examiner

Melanie M Vida

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-7, 9-10 is/are pending in the application.
- 4a) Of the above claim(s) is/are withdrawn from consideration.
- 5) ☐ Claim(s) is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 9 and 10 is/are rejected.
- 7) ☐ Claim(s) is/are objected to.
- 8) ☐ Claim(s) are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. .
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) .
- 4) ☐ Interview Summary (PTO-413) Paper No(s) .
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

Art Unit: 2626

DETAILED ACTION

Response to Amendment

1. This action is responsive to an amendment filed 11/23/03. Claims 1-4, 6-7, 9-10 are pending. Claims 5, and 8 are no longer pending because they are cancelled.

Response to Arguments

2. Applicant's arguments with respect to claims 1-4, 6-7, and 9-10 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 6** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner notes that the Applicant's claim language in **claim 6**, "a kind of signal" is unclear as to the relationship with the patch varying, (line 2).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2626

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-4, 6 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Rolleston et al. US Patent No. 5,416,613, (hereinafter, Rolleston).

Regarding, **claim 1**, Rolleston teaches a method of calibrating a printer, which reads on “an image processing method”, (col. 3, lines 52-54). The method includes the steps of printing a calibration test, as shown in figure 2, onto a recording material (204) from device dependent printer signals stored in memory, the calibration image including a plurality of color patches, which reads on “for instructing an image output unit to output onto a recording medium a reference image based on a predetermined patch pattern”, (col. 3, lines 55-59; col. 6, lines 5-9). Further, a printer response characteristic is derived from the calibration image, to generate a memory mapping of device independent colors to printer responses for subsequent use in printing images”, which reads on “generating an image output condition of the image output unit on the basis of data read from the reference image output by the image output unit”, (col. 55-59; lines 64-66). Further, at least some of the color patches are repeated more than once at a plurality of locations on the test image at spatially disparate locations across the x-axis, and dispersed across the y-axis as well, which reads on “wherein, in the patch pattern, plural identical patches of the reference image are disposed at different positions on the recording medium, including at different positions in a main-scan direction and in a sub-scan direction, and”, (col. 3, lines 59-62; col. 6, lines 37-50). Finally, the measured printer response characteristics in device independent terms to generate a memory mapping of device independent colors to printer responses for subsequent printing images defined in device independent terms, which reads on “wherein the image output condition is generated using the plural identical patches disposed at different

Art Unit: 2626

positions on the recording medium in the main-scanning direction and in the sub-scan direction”, (col. 3, lines 62-66).

Regarding, **claim 3**, Rolleston teaches that the repeated patches at a plurality of locations, as shown in figure 2, (202a), (202b), (202c), are averaged to produce a response, which reads on “wherein an average is obtained of the data concerning the plural identical patches read from the referenced image”, (col. 6, line 67 through col. 7, line 2).

Regarding, **claim 4**, Rolleston teaches patch patterns wherein the color C, M, Y, colors are dispersed through color space, to provide measurements through the entire printer gamut of colors in the m-direction and the n-direction, which reads on “wherein the number of patches varies according to a color of the patches”, (col. 6, lines 3-5; lines 9-11).

Regarding, **claim 6**, as best understood from the claim language, Rolleston teaches that the patch is used to calibrate a color space by converting an input signal from device independent color space to a printer’s device dependent color space, which reads on “wherein the patch varies according to a kind of signal used in the image output unit”, (col. 3, lines 41-47; 49-54).

Regarding, **claims 9**, please refer to the corresponding rejection in claim 1, and further where the image processing apparatus as shown in figure 1.

Regarding, **claim 10**, please refer to the corresponding rejection of claim 1, and further where the code is inherently taught as evidenced by a calibration ROM (60) which contains the instructions to calibrate a printer (50), as shown in figure 1.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2626

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Rolleston et al.

US Patent No. 5,416,613, as applied to claim 1 above, and further in view of Shimada et al. US

Patent No. 6,310,637, (hereinafter, Shimada).

Regarding, **claim 2**, Rolleston teaches the method of claim 1, with a densitometer (70) or a spectrophotometer, (col. 6, lines 56-60). Rolleston fails to expressly disclose a flatbed scanner.

However, Shimada teaches of a scanner, which reads on "the reference output image by the image output unit is read by a flatbed scanner", (col. 10, lines 63-66).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to replace the densitometer (70) taught by Rolleston, with Shimada's scanner (12).

One of ordinary skill in the art would have been motivated to use a scanner instead of a densitometer, because the latter is more expensive.

7. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Rolleston et al.

US Patent No. 5,416,613, as applied to claim 1 above, and further in view of Takahashi et al. US

Patent No. 6,454,390 B1, (hereinafter, Takahashi).

Regarding, **claim 7**, Rolleston teaches the method of claim 1, but does not expressly disclose that "the number of patches at a high density portion of the reference image is larger than the number of patches at a low density portion of the reference image".

However, Takahashi teaches a step (S122) as shown in figure 24, of measuring the reflection density of a printing patterns (61-69), as shown in figure 17, wherein if the reflection

Art Unit: 2626

optical density is > 1.0 , then the following step (S125) modifies the printing pattern to thinned pattern, or when the density > 0.7 , the pattern is overlapped, which reads on "the number of patches at a high density portion of the reference image is larger than the number of patches at a low density portion of the reference image", (col. 29, lines 38-57).

At the time the invention was made it would have been obvious to one of ordinary skill in the art to modify the test patterns of Rolleston with a method to modify the density variation of dots taught by Takahashi.

One of ordinary skill in the art would be motivated to vary the density of dots in order to be varied depending on the printing medium, given the express suggestion of Takahashi, (col. 29, lines 8-10).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ikeda et al. US Patent No. 5,566,372, plural identical test patterns disposed in a sub-scan direction and a main-scan direction, see figure 32.

Kato et al. US Patent No. 6,494,557, B1, repetitive test patterns for color correction, see figure 1.

Hillard et al. US Patent No. 6,654,493 B1, a calibration with two or more test patterns for a image capture device with redundant colored areas, (col. 4, lines 52-56).

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2626

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie M Vida whose telephone number is (703) 306-4220.

The examiner can normally be reached on 8:30 am 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A Williams can be reached on (703) 305-4863. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-6743.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Melanie M Vida
Examiner
Art Unit 2626

MMV
mmv


KIMBERLY WILLIAMS
SUPERVISORY PATENT EXAMINER

January 23, 2004